

CLAIMS

We claim:

- 5 1. A multilayer pressure sensitive correction tape comprising:
(A) a release liner,
(B) a masking layer, and
(C) a pressure sensitive adhesive layer, wherein the masking layer or
pressure sensitive adhesive layer is radiation-cured.
- 10 2. The multilayer pressure sensitive correction tape of claim 1, wherein
the masking layer and the pressure sensitive adhesive layer are radiation-cured.
- 15 3. The multilayer pressure sensitive correction tape of claim 1, wherein
the masking layer is applied to the release tape followed by curing with radiation to form a
radiation-cured masking layer.
- 20 4. The multilayer pressure sensitive correction tape of claim 1, wherein
the pressure sensitive adhesive layer is applied to the release tape followed by curing with
radiation to form a radiation-cured pressure sensitive adhesive layer.
- 25 5. The multilayer pressure sensitive correction tape of claim 1, wherein
the layer cured by radiation comprises a reactive monomer.
- 30 6. The multilayer pressure sensitive correction tape of claim 5, further
comprising a photoinitiator.
- 35 7. The multilayer pressure sensitive correction tape of claim 1, wherein
the layer cured by radiation by radiation comprises a reactive oligomer.
8. The multilayer pressure sensitive correction tape of claim 7, further
comprising a photoinitiator.
9. The multilayer pressure sensitive correction tape of claim 5, wherein
the reactive monomer is selected from the group consisting of vinyl, acrylate, methacrylate,
vinyl ether, and epoxy.

10. The multilayer pressure sensitive correction tape of claim 7, wherein the reactive oligomer is selected from the group consisting of vinyl, acrylate, methacrylate, vinyl ether, and epoxy.

11. The multilayer pressure sensitive correction tape of claim 6 wherein the photoinitiator is selected from the group consisting of benzoin alkyl ether, benzophenone, benzildimethyl ketal or a blend of 2,4,6-trimethylbenzoyldiphenylphosphine oxide, alpha-hydroxy ketone and a benzophenone derivative.

12. The multilayer pressure sensitive correction tape of claim 8, wherein the photoinitiator is selected from the group consisting of benzoin alkyl ether, benzophenone, benzildimethyl ketal or a blend of 2,4,6-trimethylbenzoyldiphenylphosphine oxide, alpha-hydroxy ketone and a benzophenone derivative.

13. The multilayer pressure sensitive correction tape of claim 1, wherein the masking layer further comprises an opaque pigment.

14. The multilayer pressure sensitive correction tape of claim 13, wherein the opaque pigment is an inorganic pigment whose color matches the background of the substrate.

15. The multilayer pressure sensitive correction tape of claim 14, wherein the opaque pigment is selected from titanium dioxide or zinc oxide.

16. The multilayer pressure sensitive correction tape of claim 1, wherein the pressure sensitive adhesive layer further comprises an opaque pigment.

17. The multilayer pressure sensitive correction tape of claim 16, wherein the opaque pigment is an inorganic pigment whose color matches the background of the substrate.

18. The multilayer pressure sensitive correction tape of claim 17, wherein the opaque pigment is selected from titanium dioxide or zinc oxide.

19. The multilayer pressure sensitive correction tape of claim 1, wherein at least one of the layers comprises an inhibitor.

20. The multilayer pressure sensitive correction tape of claim 19, wherein
5 the inhibitor is methylhydroquinone.

21. The multilayer pressure sensitive correction tape of claim 1, wherein at least one of the layers comprises an antioxidant.

22. The multilayer pressure sensitive correction tape of claim 21, wherein
10 the antioxidant is octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)-propionate.

23. The multilayer pressure sensitive correction tape of claim 1, wherein at least one of the layers comprises a tackifier.
15

24. The multilayer pressure sensitive correction tape of claim 23, wherein the tackifier is selected from the group consisting of a rosin ester, a polyamide and an aromatic resin.

25. The multilayer pressure sensitive correction tape of claim 1, wherein
20 the masking layer or pressure sensitive adhesive layer further comprises at least one of a filler, wetting agent, or bleed inhibitor.

26. The multilayer pressure sensitive correction tape of claim 25, wherein
25 the filler is calcium carbonate or aluminum oxide.

27. The multilayer pressure sensitive correction tape of claim 25, wherein the wetting agent is a nonionic fluoroaliphatic polymeric ester.

28. The multilayer pressure sensitive correction tape of claim 25, wherein
30 the bleed inhibitor is selected from the group consisting of polyvinyl amine, lecithin or N-tallow amines.

29. The multilayer pressure sensitive correction tape of claim 1, wherein
35 the thickness of the cured masking layer is from about 1 to about 100 μm .

30. The multilayer pressure sensitive correction tape of claim 29, wherein the thickness of the cured masking layer is about 25 μm .

31. The multilayer pressure sensitive correction tape of claim 1, wherein the thickness of the cured pressure sensitive adhesive layer is from about 1 to about 30 μm .

32. The multilayer pressure sensitive correction tape of claim 31, wherein the thickness of the cured pressure sensitive adhesive layer is about 5 μm .

33. The multilayer pressure sensitive correction tape of claim 1, wherein the radiation is ionizing radiation.

34. The multilayer pressure sensitive correction tape of claim 33, wherein the ionizing radiation is selected from the group consisting of electron beam radiation, gamma ray radiation and ultraviolet radiation.

35. The multilayer pressure sensitive correction tape of claim 1, wherein at least one of the two layers does not contain volatile components when it is applied to the correction tape assembly.

36. The multilayer pressure sensitive correction tape of claim 1, wherein at least one of the two layers is applied as a hot melt.

37. The multilayer pressure sensitive correction tape of claim 36, wherein the masking layer is applied as a hot melt to the correction tape assembly followed by curing.

38. The multilayer pressure sensitive correction tape of claim 36, wherein the pressure sensitive adhesive layer is applied as a hot melt to the correction tape assembly followed by curing.

39. The multilayer pressure sensitive correction tape of claim 36, wherein the masking layer and the pressure sensitive adhesive layer are applied as hot melts to the correction tape assembly followed by curing.

40. The multilayer pressure sensitive correction tape of claim 1, wherein the masking layer and pressure sensitive adhesive layer have viscosities ranging from about 1 to about 1,000,000 cps when said layers are applied to the correction tape assembly.

41. The multilayer pressure sensitive correction tape of claim 40, wherein the masking layer and multilayer pressure sensitive adhesive layer have viscosities ranging from about 100 to about 100,000 cps when said layers are applied to the correction tape assembly.

42. The multilayer pressure sensitive correction tape of claim 1 wherein; the release liner is transparent or translucent; and the masking layer is cured by directing radiation to the coated side of the release liner and to the uncoated side of the release liner.

43. A multilayer pressure sensitive correction tape comprising:
(A) a release liner;
(B) a masking layer that is cured by radiation after it is applied to the release liner; and
(C) a pressure sensitive adhesive layer that is cured by radiation after it is applied to the masking layer; wherein
(i) the masking layer and the pressure sensitive adhesive layer contain reactive monomers when they are applied to the correction tape assembly; and
(ii) the masking layer and the pressure sensitive adhesive layer contain no volatile components when they are applied to the correction tape assembly.

44. A process for the manufacture of a multilayer pressure sensitive correction tape comprising

(A) a release liner,
(B) a masking layer on the release liner, and
(C) a pressure sensitive adhesive layer on the masking layer; wherein the masking layer or pressure sensitive adhesive layer is cured by radiation.